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EXAMINER

IRVIN, THOMAS W

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DELIVERY MODE

06/08/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 15 and 22, the phrase "type" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "type"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim element "means for monitoring" and "means for determining" are means (or step) plus function limitations that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to **clearly** link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function.

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it clearly links or associates the corresponding structure, material, or acts to the claimed function without introducing any new matter (35 U.S.C. 132(a)); or

(c) State on the record where the corresponding structure, material, or acts are set forth in the written description of the specification that perform the claimed function.

For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofsaess et al. (6,517,170) in view of Newton et al. (4,255,088).

Hofsaess et al. teach an electrohydraulic brake system for motor vehicles of the brake- by-wire' type including a hydraulic pressure source that can be actuated by means of an electronic control unit and is comprised of a hydraulic pump driven by an electric motor and a high-pressure accumulator adapted to be recharged by the pump. However, Hofsaess et al. do not teach wherein a means is provided for monitoring the hydraulic delivery rate of the pump and determining quantities of gas or air at the suction side of the pump based on the monitored hydraulic delivery rate.

Newton et al. teach a means is provided for monitoring the hydraulic delivery rate of the pump and determining quantities of gas or air at the suction side of the pump based on the monitored hydraulic delivery rate (fig. 1, col.1, lines 23-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine quantities of gas or air at the suction side of the pump in order to optimize operation of the system.

Regarding claims 17, Hofsaess et al., as modified, do not disclose the monitoring of the power consumption of the motor to determine the hydraulic delivery rate, however, it would have been obvious to one of ordinary skill in the art to monitor the power consumption to determine the hydraulic delivery rate instead of monitoring the voltage. The examiner notes that power consumption and voltage are proportionally related, and one of ordinary skill in the art would choose what to monitor based on convenience.

Response to Arguments

Applicant's arguments filed 24 February 2010 have been fully considered but they are not persuasive.

In response to applicant's arguments regarding the 35 U.S.C. 112 2nd par. rejection, the examiner points out that the specification does not **clearly** link the disclosed structure to the claimed function. The written description only implicitly or inherently sets forth the corresponding structure, material, or acts that perform the claimed function.

Applicant argues that the Newton et al. reference would not have been considered by somebody in the art as it is not in a relevant field. The basis of this argument appears to be the intended use of the device of Newton et al. Applicant cites column 1 lines 9-15 which disclose that "**Illustrative** of such fields are the pumping of physiological liquids in the medical field and ... chromatography systems" (emphasis added). In response to this argument, the examiner notes that this list is not meant to be an exclusive list to the use of invention of Newton et al. Additionally, the disclosure is directed to a pump system in general. The examiner feels that the art is reasonably pertinent since it is trying to solve the problem of controlling flow through a pump.

In response to applicant's arguments regarding the "suction side of the pump" limitations, the examiner points out that applicant's arguments are narrower in scope than the claims. The claims only require the brake system to monitor the hydraulic delivery rate; determining the existence of quantities of gas or air at the suction side of the pump is only **based on** the hydraulic delivery rate, and is thus understood to be taught by Newton et al. The examiner also points out that the depicted gas bubble (26) would remain present in the cylinder (14) during both the refill (suction) and delivery (exhaust) portions of the cycle, thus being present at a suction side of the pump.

In response to applicant's argument regarding determining the electromotive force, the examiner points out that this has a measurement in volts, which Newton et al. discloses (col. 2, line 61 – col. 3, line 9).

In response to applicant's argument regarding determining the rotational speed of the pump, the examiner points to col. 5, lines 5-9 of Hofsaess et al., and col. 2, line 61 – col. 3, line 9 of Newton et al.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS IRVIN whose telephone number is (571)270-3095. The examiner can normally be reached on M-F 10-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3657

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Irvin/
Examiner, Art Unit 3657

/Bradley T King/
Primary Examiner, Art Unit 3657